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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,363	08/24/2001	Anthony C. Zuppero	22122878-6	9527

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EXAMINER	
DIAMOND, ALAN D	

ART UNIT	PAPER NUMBER
1753	

DATE MAILED: 05/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/682,363	ZUPPERO ET AL.	
	Examiner	Art Unit	
	Alan Diamond	1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 July 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11222002, 04032003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: reference sign 200 which appears in paragraph 0092. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: reference sign 5 which appears in Figure 2. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:

On page 1, at the cross reference to related applications data, the term "now U.S. Patent 6,327,859" should be inserted after "June 7, 2000".

In the Brief Description of the Drawings section, paragraph 0043, the brief description of each drawing should be a separate paragraph.

Throughout the instant specification, there are numerous occasions where multiple reference signs are listed but are not separated by commas. Commas should

be used to separate the reference signs so as to avoid an confusion as to what is intended. For example, at the first line of paragraph 0049, the term "107 109" should be changed to "107, 109" and at the second line of paragraph 0049, the term "107 108 109" should be changed to "107, 108, 109". Other locations where this type of change should be made are as follows: the last to lines of paragraph 0069; the fourth line of paragraph 0070; the first line of paragraph 0080; the first, second, third and fifth lines of paragraph 0081; the fourth line of paragraph 0083; the second line of paragraph 0087; the first and second lines of paragraph 0090; the third and fourth lines of paragraph 0091; the first line of paragraph 0097; after the term "Figure 6" at line 1 of paragraph 0104; at the first and fourth lines of paragraph 0106; at the fifth line of paragraph 0107; at the sixth line of paragraph 0108; at the fifth and tenth lines of paragraph 0109; and at the third and sixth lines of paragraph 0112.

At the first line of paragraph 0071, the term "yyyyy1yyyyy1 In" needs to be corrected.

Appropriate correction is required.

4. Claims 18 and 38 are objected to because of the following informalities: In claim 18, at line 4, the term "cm2" should be changed to "cm^2". In claim 38, at line2, the word "a" should be inserted after "and". Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> **The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.**

6. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 6, at line 2, the term "selected from the group of" should be changed to "selected from the group consisting of" so as to be consistent with Markush practice.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-46 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Fletcher et al, U.S. Patent 4,045,359.

Fletcher et al extracts excess energy from an unstable, vibrationally excited species by contacting the species with the surface of a finely divided solid (see abstract; col. 2, lines 3-11; col. 2, line 67 through col. 3, line 16; and, col. 4, lines 8-22). For example, using the apparatus of Figures 1 or 2, gas reactants A and B absorb energy to form photonically exited species A^* and/or B^*, which in turn react to form an unstable

excited reactant C^* (see the paragraph bridging cols. 2 and 3). C^* is stabilized by transient contact with the passive surface of a finely divided particle (12) during which excess energy is transferred to the surface (see col. 3, lines 2-5). Likewise, said surface can also absorb energy from B^* (see col. 3, line 9). The reactants are exited using a laser light source (col. 2, lines 45-46 and col. 3, lines 17-32), which, it is the Examiner's position, supplies the instant pulse of energy. Since Fletcher et al teaches the limitations of the instant claims, the reference is deemed to be anticipatory.

In addition, the instant requirement of applying a pulse of energy would obviously have been present once Fletcher et al's excitation using a laser is performed. Note In re Best, 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made above under 35 USC 102.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 1-46 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No.

6,114,620. Although the conflicting claims are not identical, they are not patentably distinct from each other because the use of a pulse of energy, as here claimed, to activate the catalyst surface in the claims of said patent would have been within the skill of an artisan.

12. Claims 1-46 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,222,116. Although the conflicting claims are not identical, they are not patentably distinct from each other because the use of a pulse of energy, as here claimed, to activate the catalyst surface in the claims of said patent would have been within the skill of an artisan.

13. Claims 1-46 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-74 of U.S. Patent No. 6,268,560. Although the conflicting claims are not identical, they are not patentably distinct from each other because the use of a pulse of energy, as here claimed, to activate the catalyst surface in the claims of said patent would have been within the skill of an artisan.

14. Claims 1-46 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-37 of U.S. Patent No. 6,649,823. Although the conflicting claims are not identical, they are not patentably distinct from each other because the use of a pulse of energy, as here claimed, to activate the substrate's surface in the claims of said patent would have been within the skill of an artisan.

15. Claims 1-46 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-25 of U.S. Patent No. 6,678,305. Although the conflicting claims are not identical, they are not patentably distinct from each other because the use of a pulse of energy, as here claimed, to activate the catalyst surface in the claims of said patent would have been within the skill of an artisan.

16. Claims 1-46 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,700,056. Although the conflicting claims are not identical, they are not patentably distinct from each other because the use of a pulse of energy, as here claimed, to activate the catalyst surface in the claims of said patent would have been within the skill of an artisan.

17. Claims 1-46 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-29 of copending Application No. 10/052,004. Although the conflicting claims are not identical, they are not patentably distinct from each other because the use of a pulse of energy, as here claimed, to activate the conducting surface in the claims of said copending application would have been within the skill of an artisan.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

18. Claims 1-46 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-30 of

copending Application No. 10/185,086. Although the conflicting claims are not identical, they are not patentably distinct from each other because the use of a pulse of energy, as here claimed, to activate the catalyst surface in the claims of said copending application would have been within the skill of an artisan.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

19. Claims 1-46 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 and 34-73 of copending Application No. 10/218,706. Although the conflicting claims are not identical, they are not patentably distinct from each other because the use of a pulse of energy, as here claimed, to activate the catalyst surface in the claims of said copending application would have been within the skill of an artisan.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents 4,012,301, 4,407,705, 5,470,395, and 6,327,859 and U.S. Patent Application Publication 2001/0018923 are hereby made of record.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Diamond whose telephone number is 571-272-1338. The examiner can normally be reached on Monday through Friday, 5:30 a.m. to 2:00 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alan Diamond
Primary Examiner
Art Unit 1753

Alan Diamond
May 3, 2004